

What is claimed is:

- 5        1.        An isolated, purified or recombinant complex comprising a POSH polypeptide and a POSH-associated protein (POSH-AP).
2.        The complex of claim 1, wherein the POSH-AP is HERPUD1.
- 10       3.        The complex of claim 2, wherein the HERPUD1 is ubiquitinated.
4.        The complex of claim 2, wherein the HERPUD1 is monoubiquitinated.
- 15       5.        An isolated, purified or recombinant ubiquitinated HERPUD1 polypeptide.
6.        An isolated, purified or recombinant monoubiquitinated HERPUD1 polypeptide.
- 20       7.        A method of identifying an agent that modulates a HERPUD1 function, comprising:
  - a) identifying an agent that modulates POSH; and
  - b) testing the effect of the agent on a HERPUD1 function.
- 25       8.        A method of evaluating an agent that modulates a HERPUD1 function, comprising:
  - a) providing an agent that modulates POSH; and
  - 30        b) testing the effect of the agent on a HERPUD1 function.
9.        The method of claim 7 or 8, wherein testing the effect of the agent on a HERPUD1 function comprises contacting a cell with the agent and measuring the effect of the agent on ubiquitination of HERPUD1.
- 35       10.       A method of inhibiting an activity of a POSH-AP in a cell, comprising contacting the cell with an inhibitor of POSH.
11.       The method of claim 10, wherein the POSH-AP is HERPUD1.
- 40       12.       A method of identifying a modulator of POSH, comprising:
  - a) forming a mixture comprising a POSH polypeptide, a POSH-AP, ubiquitin and a test agent; and
  - b) detecting ubiquitination of the POSH-AP,
  - 45        wherein an agent that inhibits ubiquitination of the POSH-AP is an agent that modulates POSH.

13. The method of claim 12, wherein the POSH-AP is HERPUD1.
14. The method of claim 12, further comprising testing the effect of the agent on POSH-mediated ubiquitination of a second substrate.
15. The method of claim 14, wherein the second substrate is POSH.
- 5 16. A method of identifying an agent that inhibits a neurological disorder, comprising:
- a) forming a mixture comprising a POSH polypeptide, a POSH-AP, ubiquitin and a test agent; and
- b) detecting ubiquitination of the POSH-AP,
- 10 wherein an agent that inhibits ubiquitination of the POSH-AP is an agent that inhibits a neurological disorder.
17. The method of claim 16, wherein the POSH-AP is HERPUD1.
- 15 18. The method of claim 16, further comprising testing the effect of the agent on POSH-mediated ubiquitination of a second substrate.
19. The method of claim 18, wherein the second substrate is POSH.
- 20 20. A method of treating a neurological disorder comprising administering an agent to a subject in need thereof, wherein said agent inhibits a ubiquitin ligase activity of POSH.
21. The method of claim 20, wherein the agent inhibits POSH-mediated ubiquitination of HERPUD1.
- 25 22. The method of claim 21, wherein the agent does not substantially inhibit POSH auto-ubiquitination.
23. A method of treating a neurological disorder comprising administering an agent to a subject in need thereof, wherein said agent inhibits the ubiquitination of a POSH-AP.
- 30 24. The method of claim 23, wherein the POSH-AP is HERPUD1.

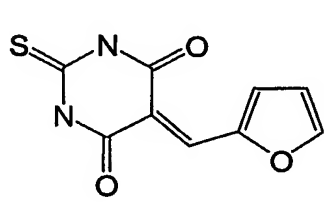
25. The method of claim 23, wherein the agent does not substantially inhibit POSH auto-ubiquitination.

26. The method of claim 20 or claim 23, wherein the neurological disorder is selected from among: Alzheimer's disease, Parkinson's disease,  
5 Huntington's disease, Pick's disease, Niemann-Pick's disease, prion-associated diseases, depression, and schizophrenia.

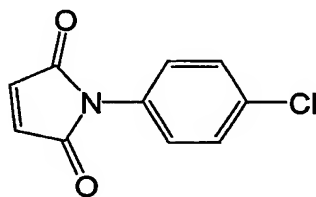
27. The use of an agent of claim 26, wherein the neurological disorder is Alzheimer's disease.

28. The method of claim 20 or claim 23, wherein said agent is selected from among: an siRNA construct, a small molecule, an antibody, and an antisense construct.  
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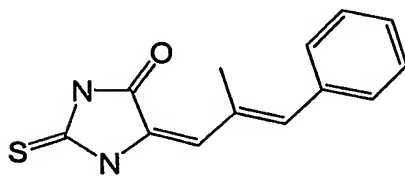
29. The method of claim 28, wherein the small molecule is selected from among:



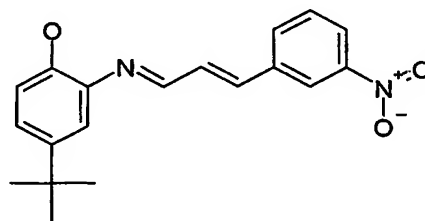
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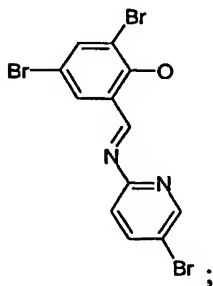
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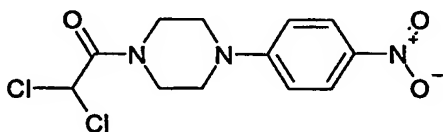
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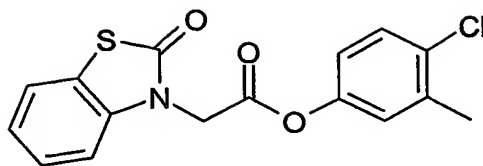
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30. A method of identifying an agent to treat a neurological disorder, the method comprising identifying a test agent that disrupts a complex of any of claims 1-4.

10 31. The method of claim 30, wherein the neurological disorder is selected from among: Alzheimer's disease, Parkinson's disease, Huntington's disease, Pick's disease, Niemann-Pick's disease, prion-associated diseases, depression, and schizophrenia.

15 32. A method of inhibiting the progression of a neurological disorder, comprising administering an agent to a subject in need thereof, wherein said agent inhibits the interaction between a POSH polypeptide and a POSH-AP.

20 33. The method of claim 32, wherein the neurological disorder is selected from among: Alzheimer's disease, Parkinson's disease, Huntington's disease, Pick's disease, Niemann-Pick's disease, prion-associated diseases, depression, and schizophrenia.

34. The method of claim 32, wherein the POSH-AP is HERPUD1.

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35. A method of testing an agent for use in treatment of a neurological disorder, comprising contacting cells that produce amyloid polypeptide with an agent that inhibits POSH activity and/or expression.

36. The method of claim 35, wherein the agent inhibits POSH ubiquitin ligase activity.
37. The method of claim 36, wherein the agent inhibits the ubiquitination of HERPUD1.
- 5 38. The method of claim 35, wherein the agent inhibits the expression of POSH.
39. The method of claim 35, wherein the agent is selected from among: an siRNA construct, a small molecule, an antibody, and an antisense construct.
- 10 40. The method of claim 35, further comprising evaluating the effect of the agent on apoptosis in the cell.